



Scientific and Technical Information Network (STINET)
&
DoD Gateway Information System (DGIS):
Reference Publications Bibliography

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DAITC/TR-88/011

Allan D. Kuhn

December 1988



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**SCIENTIFIC AND TECHNICAL INFORMATION NETWORK (STINET)
&
DOD GATEWAY INFORMATION SYSTEM (DGIS):
REFERENCE PUBLICATIONS BIBLIOGRAPHY**

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SCIENTIFIC AND TECHNICAL INFORMATION NETWORK (STINET)
&
DOD GATEWAY INFORMATION SYSTEM (DGIS)
REFERENCE PUBLICATIONS BIBLIOGRAPHY

This bibliography lists publications resulting from the efforts of the Scientific and Technical Information Network (STINET) program of the Defense Technical Information Center (DTIC). STINET is the logical outgrowth of the information networking activities of the DoD Gateway Information System (DGIS). STINET is more comprehensive in that it is the amalgamation and coalescence of many efforts, all reflected in this bibliography.

This listing is aimed at giving as comprehensive a background to STINET and DGIS developments as possible. Also, additional references to publications from outside organizations are included, as having direct bearing or influence on STINET development programs.

The bibliography was begun in October, 1985, as a means of keeping track of both the reports coming out of STINET/DGIS development activity, and the outside reports that helped the activity. The bibliography, therefore, includes reports that predate its inception. This bibliography goes through to the end of December, 1988.

ORGANIZATION ORIGIN CODES

The following organizations have had a bearing on STINET/DGIS, ranging from reference documentation to direct involvement in development activity.

AFLC	Air Force Logistics Command
AGARD	NATO Advisory Group for Aerospace Research & Development
BBN	BBN Laboratories Inc.
CDC-ALXFAC	Control Data Corp., Alexandria Facility
CISEC	CISEC (private sector company)
DAITC	Defense Applied Information Technology Center
DCOAR	OSD Directorate of Computer and Office Automation Resources
DSIO	OSD Defense Spares Initiative Office
DTIC	Defense Technical Information Center
FEDLINK	Library of Congress Federal Library & Information Network
LLNL	Lawrence Livermore National Lab., Technology Information System
LMI	Logistics Management Institute
MIT	Massachusetts Institute of Technology
NATO	North Atlantic Treaty Organization
SIRSI	Sirsi Corp.



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I.a. SCIENTIFIC AND TECHNICAL INFORMATION NETWORK (STINET) CONCEPT

DTIC/AGARD: Cotter, G. A.: The Scientific and Technical Information Network (STINET): Foundation for Evolution.

September 1987, AD-A189 750.

****Describes the program at DTIC to develop and implement an integrated, functional scientific and technical information network throughout DoD, to include access to national and international information sources. Covers gateways, DGIS, interfaces, and IBIS (LAM).

****Published in and presented at AGARD Conference: Barriers to Information Transfer and Approaches Toward Their Reduction; AGARD-CPP-430; Paper 5, as "Information Retrieval Systems Evolve - Advances for Easier and more Successful Use."

DTIC/DAITC: Cotter, G. A.: Global Scientific and Technical Information Network. December 1988.

****Discusses the ramifications of technologies and developments for a STINET that encompasses scientific and technical information across the globe.

****Presented at and Published in Online Information 88, 12th International Online Information Meeting, 6-8 December 1988, London, England, pp. 611-618.

DTIC/DAITC: Kuhn, A. D. et al.: "The DoD Gateway Information System (DGIS): The Department of Defense Microcomputer User's Gateway to the World."

In: Microcomputers for Information Management: An International Journal for Library and Information Services, V5 N2 June 1988 pp.73-92.

****Discusses how the DoD microcomputer user may expand the power of the microcomputer with the power of DGIS to access information beyond the office environment; relates current technology developments to be incorporated into DGIS, including artificial intelligence and hypermedia.

DTIC/DAITC: Kuhn, A. D.: Scientific and Technical Information Network (STINET) & DoD Gateway Information System (DGIS): Reference Publications Bibliography. December 1988, available as an AD.

****Lists documents and publications (c. 90 refs.) resulting from the STINET/DGIS development activities, or having influenced the activities, up to the end of 1988.

I.b. DOD GATEWAY INFORMATION SYSTEM (DGIS) CONCEPT

DTIC: Cotter, G. A.: The DoD Gateway Information System. October 1985, AD-A161 701.

****Development of the DoD Gateway Information System to provide online, streamlined methods for identifying, accessing, searching and analyzing data from databases of interest to the DoD community.

****Presented at IEEE Conference, Williamsburg, VA, Oct 1985.

DTIC: Cotter, G. A.: The DoD Gateway Information System: Prototype Experience. Apr 86, AD-A166 200.

****DGIS is being developed to provide the DoD community with a modern tool for accessing external databases and extracting information products from them. Developments and evaluations to date are described.

****Presented at National Online Meeting, New York, May 1986.

DTIC: Cotter, G. A.: Commercial Database Searching: A Proposed Additional DTIC User Service. March 1980, AD-A181 104.

****This report proposed in 1980 that DTIC establish central access to information systems for DTIC customers.

****This paper was a forerunner to establishing automated gateway access.

DTIC: Cotter, G. A., et al.: DoD Gateway Information System: Bibliography, Directory of Resources, Prototype Experience, and User Interface Design. ED-278 407 (ERIC), 1986.

****A compilation of the three documents titled (q.v.), plus the DGIS bibliography as of the time submitted (1986).

****Available from ERIC Document Reproduction Service (CMIC).

DTIC: Erwin, J. M.: Defense Gateway Information System (DGIS). Project Status Report. November 1986. Internal report.

****Report to DTIC and DLA on DGIS to date; Intelligent Gateway Processor applications, establishment of DGIS, hardware and software, enhancements, development efforts, logistics gateway development efforts, Defense Applied Information Technology Center (DAITC), appended DGIS activity and effort references.

DTIC: Powell, M.: "GATEWAY." Dimensions, Defense Logistics Agency, V8 N10, August 1987, pp.6-8.

****Concise informative overview of DGIS uses and purposes; makes relation to logistics information area.

II. GATEWAY CONCEPT

LLNL: Hampel, V. E., et al.: "TIS" An Intelligent Gateway Computer for Information and Modeling Networks: Overview. August 1983, UCRL-53493, DTIC AD-A135 916.

****Development of software for Intelligent Gateway Computers (IGC) suitable for the prototyping of advanced, integrated information networks.

LLNL: Burton, H. D.: The Intelligent Gateway: A Dynamic Resource Environment. July 1985, UCRL-93125.

****Concept of gateways and front-ends to facilitate access to the growing multiplicity of computer based resources.

****Prepared for Ninth International OnLine Information Meeting, London, England, Dec 85.

DTIC: Cotter, G. A.: An Intelligent Gateway for the Department of Defense: The Technology Information System. June 1984, AD-A133 800.

****DTIC is directed by OUSDRE(R/AT/R/LM) to be the DoD focal point for development of an intergovernmental intelligent gateway computer system.

****Presented at AF Scientific and Technical Information Officers Policy Conference, Alexandria, VA, Jun 84.

LLNL: Berch, M. C.: The UNIX Connection. UNIX Review, V4N5, May 1986, pp.44-53.

****Partially technical and historical recounting of application of the TIS-developed Intelligent Gateway Processor (IGP) approach to tying together disparate systems, using UNIX-based services.

LLNL: [] "TIS" Bibliography: Technology Information System/Intelligent

Gateway Information Processor (TIS/IGP). April 1986.

****LLNL/TIS bibliography covering 1973-April 1986. Excludes DGIS reports.

AFLC/LLNL: [] Air Force Logistics Command Prototype Logistics Data Integration System (LOGDIS): User's Manual. Version 1.2 Preprint, March 1986.
****LOGDIS is a dedicated office automation-oriented system, to provide access to external resources, database management, file maintenance, em, personal calendar system, text editor and word processor, spreadsheet, and graphics, supported by a powerful UNIX OS-based computer system.

LLNL: Hampel, V. E., et al.: Technology Information System Standard Operating Procedures. Rev. 1, August 1986.

****Summarizes TIS program overview, and research and development requirements and obligations, with development focus on the Intelligent Gateway Processor (IGP).

LLNL: Wampler, S.: "Lab Grants License for Software" and "Easier Work, Time Savings Result from Lab Software." Lawrence Livermore National Laboratory Weekly Bulletin, 4 February 1987 v12 n5, pp.1,5.

****The Integrated Gateway Processor (IGP) is commercialized into two major products by Control Data Corp, the IGP itself and the Electronic Mail package. The CDC product name is ASCENT(r). The expected retail cost is about \$18,000 on a VAX-8600 and \$7,000 on a MicroVax.

DTIC/LMI: Shockley, C. W.: Capitalizing on Experience with Intelligent Gateway Software. January 1988, LMI Report DL604R1, AD-A193 362.

****Addresses the software implementations done by DGIS (DTIC), SearchMAESTRO (DTIC/EasyNet), Micro-CSIN (NLM), and Grateful MED (NLM), from the points of view of helping users to search, retrieve, and analyze information from different data systems.

III. DGIS DEVELOPMENTS AND APPLICATIONS

A. DGIS-SPONSORED ACTIVITIES

DTIC: Powell, M. E.: Selected Papers from the First Conference on Computer Interfaces and Intermediaries for Information Retrieval, Held October 3-6, 1984, Williamsburg, Virginia. May 1986, AD-A167 700.

****This conference took place to promote exchange and dissemination of research efforts toward improvement in information retrieval, with emphasis on human-computer interaction and needs.

DTIC/MIT: Jacobson, C. E., et al.: Proceedings of the Second Conference on Computer Interfaces and Intermediaries for Information Retrieval, May 28-31, 1986, Boston, Massachusetts. May 1986, DTIC/TR-86/5, AD-A174 000.

****This conference, as an update of the previous one, brought together experts in interfaces and gateways, with additional emphasis on artificial intelligence in retrieval, command command language, and natural language.

****Co-sponsored with the Massachusetts Institute of Technology.

B. DGIS DIRECTORY OF ONLINE RESOURCES

DTIC: Jacobson, C. E. et al.: Directory of DoD-Sponsored R&D Databases. February 1988, AD-B116 400.

****Lists 422 DoD R&D databases by database name, dates of coverage, points of contact, hardware/software configuration, and description. Database name, organization name, and subject indices are included.

****This 2nd edition is a hard copy product of the DGIS Online Directory. The first edition laid the foundation for the online Directory.

DTIC: Chastain, G.: A Study of User-Defined Searching Requirements for the On-Line Version of the Directory of DoD-Sponsored R&D Data Bases on the Defense Gateway Computer System. March 1985, AD-A153 000.

****This study surveyed user searching requirements of a DGIS online resource directory. The survey provides recommendations for a user-friendly interface for the online directory.

DTIC: Jacobson, C. E. et al.: The DoD Gateway Information System Directory of Resources. In ASIS: Database Management: Building, Changing, and Using Databases; Collected Papers and Abstracts, 15th Mid-Year Meeting, Paper No. 13, May 1986. Also available as: June 1986, DTIC/TR-86/8, AD-A174 154.

****The core of the DGIS is a Directory of Resources which contains information on the content, scope, and availability of selected databases. The prototype Directory is built on the INGRES dbms using a menu-driven interface. This paper describes data collection, database design, implementation, and future directions.

****Presented at ASIS Mid-Year Meeting, Portland, OR, 11-14 May 1986.

DTIC: []: Directory of Resources, DRAFT Documentation, Version 1. [May? 1986].

****Describes preliminary version, as an INGRES-based demonstration system. Version I shows searching by database name, acronym, producer, and descriptors. Version II will be an enhanced version, and version III is planned operational version. Includes menu displays.

C. DGIS INTERFACE DESIGN

DTIC: Kuhn, A. D., et al.: The DoD Gateway Information System (DGIS): User Interface Design. September 1986, AD-A174 150.

****A DGIS menu system was designed to guide the user through the paths of accessing and processing information in an organized and logical manner, using the multitude of capabilities offered on DGIS.

****Presented at and Published in Proceedings of the 49th Annual Meeting of the American Society for Information Science, Chicago, IL, 28 Sep-2 Oct 1986.

DTIC/CDC-ALXFAC: Generous, C., et al.: Command Pattern Search (COPS) System. Electronic document online DGIS/DTICLOG as 'cops', July 1987.

****COPS is a computer optimization routine that permits English language command truncation, and adjusts for command entry typos.

D. DGIS COMMON COMMAND LANGUAGE

NISO: [] Proposed American National Standard for Information Sciences--Common Command Language for Online Interactive Information Retrieval. ANSI Z39.58-198X, 1 July 1987.

****Proposed CCL standard circulated for ballot. Developed by the National Information Standards Organization (NISO) (Z39) committee. Includes Z39 participants.

DTIC: Kuhn, A. D., et al.: DoD Gateway Information System (DGIS) Common Command

Language: The First Prototyping & and The Decision for Artificial Intelligence. August 1987, AD-A185 950.

****The first prototyping in C language is recounted, with the experiences and results acquired. The CCL issue is comprised of a CCL standard language, a CCL system to handle unfamiliar databases, and the objective of the CCL system. The resultant transition to a PROLOG-based CCL System is discussed.

****DTIC AI Foundational Series No. 4, DTIC CCL Report No. 1.

****Presented at and Published minus addenda in National Online Meeting, New York, May 10-12, 1988.

DTIC: Bixby, R. L.: DoD Gateway Information System (DGIS): Common Command Language Mapping. October 1987, AD-A185 951.

****This report relates the requirements analyses for the initial CCL prototypes in C language, and discusses requirements issues that aided the decision for the transition to Artificial Intelligence application.

****DTIC CCL Report No. 2.

DTIC/CDC-ALXFAC: Tran, D. T.: DoD Gateway Information System (DGIS): Common Command Language: PROLOG Knowledge Base Profile. October, 1987, AD-A186 150.

****Concise, understandable explanation of the technical implications of using Artificial Intelligence techniques in CCL, through the application of Quintus (r) Prolog.

****DTIC AI Foundational Series No. 5, DTIC CCL Report No. 3. Appears also in Quintus (r) Prolog Newsletter, September 1987; available in DGIS DTICLOG.

DTIC/DAITC: Kuhn, A. D.: DoD Gateway Information System (DGIS) Common Command Language: The Decision for Artificial Intelligence. March 1988.

****Recounts the results of the original prototype feasibility study, the factors for deciding to go to a PROLOG-based CCL System (CCLS), and the knowledge-base approach in using PROLOG.

****Presented at and Published in RIAO88 international conference on User-Oriented Content-Based Text and Image Handling, Massachusetts Institute of Technology, Cambridge, March 21-24, 1988, pp. 864-882.

DTIC/DAITC: Tran, D., et al.: An Assessment of the Differences between DGIS and [] Common Command Language (CCL) Design Developments. 11 April 1988.

****Following a review of [] enhancements to SearchMAESTRO, which included CCL, the DGIS CCLS Design project staff made a comparative assessment of the two CCLs. This report differentiates the purposes and functions of the developments.

****An internal report from the DAITC/DGIS CCL/KBS Lab.; for development and applications reference only.

DTIC/DAITC: Kuhn, A. D.: DoD Gateway Information System (DGIS): The Development toward Artificial Intelligence and Hypermedia in Common Command Language. December 1988.

****Recounts the C language feasibility prototypes, the incorporation of artificial intelligence, and the entry into hypermedia.

****Presented at and Published in Online Information 88, 12th International Online Information Meeting, 6-8 December 1988, London, England, pp. 691-704.

E. SEARCHMAESTRO

DSIO: Thomas, J. P.: Response to question: WAR item (DSIO Opens Gate to DTIC Data Base Gateway): Memorandum for DSAD for Logistics. [-- December 1986]

****The Management Systems Division of the Defense Spares Initiatives Office

(OSD) has established access to over 700 data bases through the Metaphor workstation. User access has been provided on a test basis to the DTIC "information gateway". DSIO/SPM needs access to the wealth of external government and commercial databases to enhance their mission.

DTIC/EasyNet: [] A Directory of Databases Available Through SearchMAESTRO. October 1987, AD-A188 813.

****Second SearchMAESTRO directory, listing 900+ databases, including DROLS.

DTIC/DAITC/EasyNet: [] SearchMAESTRO - Orchestrates Your Information Strategies, Leads You to Vital Databases, Conducts Your Information Searches. [1988]

**** Brochure explaining what a database is, what SearchMAESTRO will do for you, a representative listing of the databases available, and the list of the few commands needed to use SearchMAESTRO.

F. DGIS USER SERVICES

DTIC/BBN: [Conry, T., et al.]: Users Guide to DGIS. Gateway User Support and Training Office (GUSTO), BBN Labs. Inc., Arlington, VA. May 1987.

****DGIS users manual to the DGIS system, based on functions and menus.

DTIC/BBN: [Conry, T., et al.]: DGIS Workbook. Gateway User Support and Training Office (GUSTO), BBN Labs. Inc., Arlington, VA. May 1987.

****Easy-to-follow review of the DGIS menu system, its functions and responses.

DTIC: Powell, M. E. GUSTO: Training Tailored to User Needs. May 1987, AD-A181 105.

****The Gateway User Support and Training Office (GUSTO) provides telephone hotline service, system documentation, training, and user evaluation. GUSTO aims are flexibility and rapid response to change in the heterogeneous DoD information community.

****Presented at and Published in National Online Meeting, New York, May 1987.

G. INCORPORATING DGIS CAPABILITIES

DTIC: Kuhn, A. D. et al.: DTIC Model Action Plan for Incorporating DGIS Capabilities: Final Project Report. 23 May 1986, AD-A181 102.

****With the help of a DTIC testbed office (DTIC-HAR), a model plan for incorporating DGIS capabilities was formulated. An information flow survey of the office was made and is included. Recommendations are given for expanding and enhancing the services of the testbed office to its users through DGIS.

DTIC/LMI: [O'Connor, D.]: Maintenance Technology Database Survey. 28 Jul 86.

****Briefing package presented by Logistics Management Institute to the Joint Depot Maintenance Analysis Group (JADMAG). Presentation summarized project to examine feasibility of gateway technology for informing depots of advanced technology appropriate to depot maintenance. Recommends micro-based DGIS.

DTIC/LMI: Hamilton III, W. P.: Establishing a Maintenance Technology Gateway. April 1987, Report DL506R1.

****JADMAG seeks new technology information for maintenance productivity from about 100 sources, including about 40 databases. A micro-computer based intelligent gateway processor is recommended. Until acquired, use of DGIS is recommended.

DTIC/LMI: Hartt, R. W.: Bibliographic Networks and Microcomputer Applications for Aerospace and Defense Scientific and Technical Information. October 1986, DTIC/TR-87/3, AD-A174 152,

****Discusses how a single library can access a wide variety of bibliographic information, participate in shared cataloging, and acquire holdings through application of the Local Automation Model (LAM).

H. DGIS EVALUATION

DTIC: Rothschild, M. C. Defense Gateway Information System (DGIS): DGIS Information Processing; An Evaluation. Inhouse/Intern paper. 2 January 1987. ****A study, review, and critique of selected DGIS processes, conducted over a four week period (December 1986), by a professional information searcher new to DGIS. Indicates inconsistencies and provides recommendations.

DTIC/BBN: Grover, B. W., et al.: DGIS User Survey. BBN Labs. Rept. No. 6698, December 1987.

****The goal of the survey was to collect user feedback to help DTIC improve the system. Report summarizes the feedback and includes copies of all responses.

I. IMPORTING CAPABILITIES TO DGIS

DTIC/MIT: Marcus, R. S.: Experimental Evaluation of CONIT in DGIS Gateway Environment. February 1988, LIDS-P-1746 (MIT Lab. for Information and Decision Systems).

****Test of CONIT (Connector for Networked Information Transfer) retrieval assistance techniques as a possible interface on DGIS. CONIT makes use of advanced assistance functionalities.

IV. POST-PROCESSING

LLNL: Bollinger, W. A., et al.: User Requirements, Post-Processing of Bibliographic Information. February 1984, UCAR-10114.

****Describes the requirements, motivation, needs, and cost benefits expected in the post-processing capabilities of data from the three large federal information systems: DOE/RECON, NASA/RECON, and DoD/DROLS.

LLNL: Bollinger, W. A., et al.: Post-Processing of Bibliographic Citations from DOE/RECON, NASA/RECON, and DOD/DROLS. August 1984, UCRL-89995-Rev-1.

****Results of the development of an interactive, self-guided program for the joint post-processing of bibliographic citations from the major federal information centers.

****Prepared for presentation to Eighth International Online Information Meeting, London, England, Dec 84.

LLNL: Burton, H. D.: Bibliographic Post-Processing with the TIS Intelligent Gateway: Analytical and Communication Capabilities. September 1985, UCID-20529.

****Describes and demonstrates the capabilities of the PROCESS functions of the TIS Intelligent Gateway, to support bibliometric analysis of databases.

LLNL: Burton, H. D.: Non-Standard Post-Processing Functions. July 1985 (3p.)

****Contains instructions for use of miscellaneous post-processing functions: new version of 'plot'; translators for DIALOG, SDC, BRS; 'select' function on data fields.

V. INTEGRATED BIBLIOGRAPHIC INFORMATION SYSTEM (IBIS);
LOCAL AUTOMATION MODEL (LAM); became
SCIENTIFIC & TECHNICAL INFORMATION LIBRARY AUTOMATION SYSTEM (STILAS)
in 1988;
interface with STINET.

DTIC/LMI: Hamilton, W. P., III, et al.: Local Automation Model: Conceptual Design Document. April 1983, AD-A144 383.

****The LAM will replace the existing manual and batch procedures by technical library personnel, and access both local files and DTIC Technical Report Database files.

DTIC/LMI: Hamilton, W. P., III, et. al.: Local Automation Model: Functional Description. September 1983, AD-A113 389.

****Describes system designed to meet the operating and service needs of a DoD technical library.

DTIC/LMI: Hamilton, W. P., III, et al.: Local Automation Model: System Specification. March 1984, AD-A141 503.

****The LAM will provide DoD technical libraries a local automated information system that stores local bibliographic files and accesses both those files and the DTIC Technical Reports Database.

DTIC/LMI: Hamilton, W. P., III, et al.: Local Automation Model: Assessment of Library Software Availability. September 1984, AD-B087 513. Distribution limited to USGO; others contact DTIC.

****Describes the software assessment used to determine which commercially available software packages would be suitable for implementing the LAM library functions.

DTIC/LMI: Hartt, R. W. et al.: Local Automation Model Software Benchmarking: Test Plan. March 1985, AD-154 349.

****Contains criteria, both performance and functional, for selecting from among the packages recommended for benchmarking.

DTIC/LMI: Hartt, R. W. et al.: Local Automation Model: Program Specification -- User Access for Cataloging and Retrieval. July 1985, AD-A179 411.

****This specification describes the requirements and design details for integrating operation of two software components through the development of a standard command language and user interface. With one set of commands, the user will be able to simultaneously search heterogeneous databases, merge and postprocess search results, and share citations to new holdings with other members of a network of technical libraries and information centers within the Department of Defense.

DTIC/LMI: Hartt, R. W. et al.: Local Automation Model: Implementation Planning for the Prototype System. October 1985, AD-A167 439.

****This plan addresses site preparation, installation, accreditation, operation, and maintenance for the prototype minicomputer version of the LAM.

DTIC/LMI: Hartt, R. W. et al.: Microcomputer-Based Local Automation Model:

Functional Description. October 1985, AD-A160 610.

****The Microcomputer-based LAM (MicroLAM) will demonstrate the integration of a local collection management system with access to remote bibliographic databases, through an intelligent gateway processor, in addition to accessing both the local catalog and the DTIC Technical Report Database simultaneously.

DTIC/LMI: Hartt, R. W. et al.: Microcomputer-Based Local Automation Model: Evaluation of Library Software. October 1985, AD-B097 488L.

****Evaluation of commercially available library software for use in implementing the prototype MicroLAM at TRADOC Technical Library, Ft. Monroe, VA.

DTIC/LMI: Hartt, R. W. et al.: Microcomputer-Based Local Automation Model: Test Plan. 31 January 1986, AD-A166 655.

****Plan is written to establish a test plan to determine whether the prototype system provides the functions and capabilities required for the MicroLAM.

DTIC/LMI: Hartt, R. W. et al.: Microcomputer-Based Local Automation Model: System Planning Guidance. May 1986, AD-A168 136.

****Provides guidance to Department of Defense libraries and information centers on implementing the MicroLAM.

DTIC: Cotter, G. A., et al.: Integrated Bibliographic Information System: Integrating Resources by Integrating Information Technologies. May 1985, AD-A157 700.

****Development of an integrated library system combined with an intelligent gateway capable of querying and updating simultaneously more than one heterogeneous bibliographic database.

****Presented at National Online Conference, New York, May 1985.

DTIC: Cotter, G. A., et al.: The Integrated Bibliographic Information System: Resource Sharing Tailored for Local Needs. November 1985, AD-A161 700.

****In promoting resource sharing for speeding access to information, the IBIS will query databases using a common command language, download and post-process data, and allow libraries to tailor search results derived from external sources and a local catalog.

****Presented at and Published in Ninth International Online Meeting, London, England, December 1985.

LLNL: Burton, H. D.: Integration of an Automated Library Support System with an Intelligent Gateway. August 1984, UCRL-91383.

****Describes projects for evaluating library support packages and integrating the most desirable system with the TIS gateway to provide a comprehensive prototype for libraries and information centers.

****Prepared for presentation to Integrated Online Library Systems, Atlanta, GA, Aug 84.

LLNL/DTIC: Burton, H. D., et al.: Resource Sharing through Integration of an Intelligent Gateway and Library Support Software. Special Libraries, Winter 1986 V77 N1 pp.28-35. AD-A165 050.

****Integration of an intelligent gateway computer system with a commercial, online support system is undergoing testing for DoD libraries, to promote resource sharing in a distributed environment.

DTIC/LMI: Hartt, R. W., et al.: Microcomputer-Based Local Automation Model: System Planning Guidance. May 1986, AD-A168 136.

****Provides guidance to DoD libraries on implementing the microcomputer-based LAM. Tasks include decisions in automating functions, peripheral equipment, telecommunications, and cost estimates.

DTIC/LMI: Cotter, G. A., et al.: An Integrated Bibliographic Information System: Concept and Application for Resource Sharing in Special Libraries. June 1986, DTIC/TR-87-2, AD-A174 151.

****DTIC offers libraries and information centers a fully resident computer system supporting local collection management and intelligent gateway capabilities, to access diverse bibliographic resources, including the local collection and DROLS.

****Presented at Special Libraries Association Annual Meeting 1986.

DTIC/LMI: Goodwin, D. L.: Local Automation Model: Army Research Institute Site Survey. August 1987, LMI/DL604TR2.

****Discusses three areas critical to the installation of a LAM at ARI: system configuration, implementation tasks, and system costs.

DTIC/SIRSI/FEDLINK: [] STILAS - Scientific and Technical Information Library Automation System. [1988]

****Brochure explaining STILAS (formerly LAM) library collection management modules and STILAS hardware. An open contract between the Library of Congress and Sirsi Corp. enables Federal Government libraries to purchase STILAS through FEDLINK.

VI. DEFENSE APPLIED INFORMATION TECHNOLOGY CENTER (DAITC)

DTIC: [Everidge, B.]: Charter for the Defense Applied Information Technology Center. OSD Draft 20 Jan 1987.

****The DAITC is established by [OSD, DTIC, JCS] as a joint cooperative DoD activity. Its purpose is to investigate available information technologies for implementation in DoD.

DTIC/CDC-ALXFAC: Malamud, C., et al.: Defense Applied Information Research Center: Overview of Activities (Last Revised July 10, 1986).

****Briefing vu-graphs of operation and network architecture concepts for the proposed DAIRC. Role, 1987 efforts, budget, Defense Virtual Network, full text retrieval system, DGIS.

DAITC: []: Defense Applied Information Research Center: Long Term Planning Scenario. 8 October 1986.

****Statement of General DoD ADP need for Center, specific OSD needs addressed by Center, and general five year scenario for Center operation. Includes charts on planning for Five-Year Defense Program, large scale computational system, intelligent gateway processors, and interoperability and information system prototyping.

DCOAR: Lawson, C. J.: OSD Automation Support Issues: Memorandum for Mr. D. O. Cooke, Director, Washington Headquarters Services. 2 December 1986.

****The purpose of the DAITC is to provide the Defense community the best possible information resources as a basis for improved decision making, staff productivity, and lowest developmental and operational costs, relative to DoD IRM requirements and to the Brooks Bill.

DAITC: [] Defense Applied Information Technology Center. [1988]

****DAITC brochure explaining purpose, major functions, approaches, facilities, and contacts.

VII. SECURE GATEWAY CONCEPT

CISEC/DCOAR: Doty, K., et al.: System Requirements: Secure Gateway. Task I Working Paper, Coordination Draft. June 1986. Distribution limited to USGO.
****SDIO has requested that the technical feasibility of a secure gateway be studied concerning costs, time frame, security requirements, and protection of data. The term 'Secure Gateway' is defined as applying to hardware, software, communications, and procedures integrated to perform the needed SDIO capability.

CISEC/DCOAR: Doty, K., et al.: Secure Gateway: Implementation Approaches. Task II Working Paper, Coordination Draft. October 1986. Distribution limited to USGO.

****Ground rules are established to make the SDIO secure gateway operational, based on the 'Trusted Computer Security Evaluation Criteria' of the National Computer Security Center.

CISEC/DCOAR: Doty, K.: Potential Development of Multi-Level Secure Gateway Technology. [Presentation Vugraphs] [November 1987].

****Presentation on current status of secure gateway development, with the view that MLS gateway development is needed, feasible, and affordable, with the DAITC providing the appropriate development environment.

VIII. ARTIFICIAL INTELLIGENCE

DTIC/CDC-ALXFAC: Kuhn, A. D., et al. Toward an Artificial Intelligence Environment for DTIC: Staffing Qualification Criteria for AI Application Development. February 1987, AD-A181 100.

****Discusses the recognized development areas in AI, problem areas, and current efforts relative to the future. These aspects are discussed in relation to setting the criteria for qualified lab participants.

****DTIC AI Foundational Series No. 1.

DTIC: Kuhn, A. D. Artificial Intelligence Developments re: DoD Gateway Information System (DGIS) & Defense Applied Information Technology Center (DAITC). February 1987, AD-A181 101.

****DTIC has several initiatives in AI and AI-like activities, associated with the DGIS. Our experience shows that AI-like technology precedes pure AI, and in doing so blends with it. DGIS is shown to be a low-level AI-like system, with the goal of incorporating AI to give the appearance of having human responses.

****DTIC AI Foundational Series No. 2. Report written in response to a DLA and DTIC Command request.

DTIC: Kuhn, A. D. Toward an Artificial Intelligence Environment for DTIC: Proposed Tasks; Recommended Configurations; Projected Start-up Costs. May 1987, AD-A181 103.

****Discusses candidate tasks for initiating AI activity, configuration issues concerning mission, organization, and system; and projected costs associated with acquiring expertise and hardware/software.

****DTIC AI Foundational Series No. 3.

DTIC AI Foundational Series No. 4: see III.D. DGIS COMMON COMMAND LANGUAGE.

DTIC AI Foundational Series No. 5: see III.D. DGIS COMMON COMMAND LANGUAGE.

IX. NETWORKING AND INTEROPERABILITY

DTIC/DAITC: [Hunter, J. F.] Networking and Interoperability Laboratory.
[November 1988]

****The mission of the DAITC Interoperability and Networking Laboratory is to provide an environment for the assessment of trends in networking and data communications, to furnish solutions for direct and transparent access to a wide variety of geographically distributed resources.

X. NATO SCIENTIFIC AND TECHNICAL INFORMATION SERVICE (NSTIS)

NATO/AGARD: []: Proposal to Establish a NATO Scientific and Technical Information (STI) Service. April 1986, TIP/WG 01.

****This proposal is a concept description concerning the establishment of a NATO STI Service (NSTIS). It provides background, suggests services, discusses installation needs, and recommends procedure for the Requirements Definition phase.

****Jointly compiled and reviewed by people from NATO, AGARD, DTIC, and LMI.

DTIC/LMI: []: NATO Scientific and Technical Information Service (NSTIS):
Functional Description. August 1987, AD-A190 350.

****Functional description provides for succeeding phases of the process; scope, products and services of the NSTIS; a work breakdown structure; and identification of processes for NSTIS implementation.

****Jointly compiled and reviewed by people from NATO, AGARD, DTIC, and LMI.

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